Appeal Brief 9/19/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: **MARC SEGRE**	§	Attorney Docket No.: **RPS920000029US1**
Serial No.: **09/779,306**	§	Examiner: **SHAPIRO, LEONID**
Filed: **7 FEBRUARY 2001**	§	Art Unit: **2673**
For: **AUTOMATIC KEYBOARD MOUSE SWITCH**	§	

APPEAL BRIEF

MS Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is submitted in triplicate in support of the Appeal in the above-identified application.

CERTIFICATE OF MAILING
37 C.F.R. § 1.8(a)

I hereby certify that this correspondence is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 9/15/03 By: Catherine D. Nelson

REAL PARTY IN INTEREST

International Business Machines Corporation, the assignee of record as evidenced by the Assignment recorded at Frame 0679 of Reel 011583, is the real party in interest in the subject Appeal.

RELATED APPEALS AND INTERFERENCES

No appeals or interferences known to Appellant, Appellant's legal representative, or assignee will directly affect or be directly affected by or have a bearing on the Board's decision in the present Appeal.

STATUS OF THE CLAIMS

Claims 1-18 were originally presented. In Amendment A, dated January 20, 2003, Claims 4-5, 8, 10-12 and 16-17 were canceled, leaving Claims 1-3, 6-7, 9, 13-15 and 18 pending. All pending claims stand finally rejected by the Examiner as noted in the Advisory Action dated July 16, 2003. The rejection of each pending claim is appealed.

STATUS OF AMENDMENTS

An amendment to Claim 9 was proposed in Amendment C dated June 16, 2003, subsequent to the Final Rejection dated May 2, 2003, and labeled Paper No. 10. As noted by the Examiner in the Advisory Action dated July 16, 2003, and labeled Paper No. 12, the amendment to Claim 9 was entered upon filing of the instant Appeal Brief.

SUMMARY OF THE INVENTION

As described at page 3, lines 12-16, the present invention is directed to an automatic switching device that enables a single set of input devices to be employed by a user in interacting with multiple data processing systems without requiring the user to manually switch the input device signals between the data processing systems.

Figure 1 illustrates a set of data processing systems in accordance with an embodiment of the present invention. As described at page 6, lines 3-24, data processing system group 102 includes multiple data processing systems 104a-104n, which may operate independently or cooperatively. Each data processing system 104a-104n has a separate display and shares the same user input devices 106. User input devices 106 include at least a pointing device (e.g., mouse) and may optionally include a keyboard. As depicted, user input devices 106 are coupled

to data processing systems 104a-104n via an input controller/switch 108, which automatically selects an active data processing system according to the process described below.

Figure 2 depicts one exemplary arrangement of logical display areas 204a-204n for the data processing systems 104a-104n of Figure 1. As described in the present specification at page 7, lines 10-28, the logical arrangement of display areas 204a-204n is an array of contiguous display areas having two rows and two columns. The logical arrangement display areas 204a-204n preferably corresponds to a physical arrangement of the displays of data processing systems 104a-104n.

As described at page 8, line 21 *et seq.*, display areas 204a-204n have common boundaries. That is, the right boundary (as viewed) for display area 204a coincides with the left boundary for display area 204b; the lower boundary for display area 204a coincides with the upper boundary for display area 204c; the lower boundary for display area 204b coincides with the upper boundary for display area 204n; and the right boundary for display area 204c coincides with the left boundary for display area 204n.

As described at page 9, line 4 *et seq.*, the common boundaries between logical display areas 204 form switch points between active systems. That is, movement of the cursor 206 across a common boundary causes input controller/switch 108 to automatic switch signal from input devices 106 from a first data processing system 104 corresponding to the logical display area from which the cursor was moved to a second data processing system 104 corresponding to the logical display area into which the cursor moved. The user may thus automatically switch input device signals between active data processing systems, without use of a manual switch or hot-key sequence by simply manipulating a pointing device to move the cursor across a common boundary shared by the logical display areas of two data processing systems.

Figure 3 is a high level flowchart of a process for automatically switching input device signals between data processing systems in accordance with the present invention. As described at page 12, line 19 *et seq.*, the process of Figure 3 begins at step 302, which depicts detection of cursor movement within the display area of an active data processing system receiving input signals from a set of common input devices shared by multiple data processing systems. The process then passes to step 304, which illustrates a determination of whether a boundary for the display area of the active data processing was crossed by movement of the cursor. If not, the process proceeds to step 306, which depicts updating the cursor location within the display area

of the active data processing system, which will result in updating the display image of the cursor within the display area.

As described at page 13, line 7 *et seq.*, if movement of the cursor caused the cursor to cross a boundary, the process then proceeds instead to step 308, which illustrates a determination of whether the cursor movement crosses a common boundary between the logical display areas of two data processing systems. If not, the process proceeds to step 310, which depicts maintaining the cursor location at the display area boundary. If, however, movement of the cursor crosses a common boundary between two display areas, the process proceeds instead from step 308 to step 312, which illustrates input controller/switch 108 switching the active data processing system to which input signals are transmitted from a first data processing system to a second data processing system corresponding to the adjacent display area into which the cursor was moved. The process next passes to step 314, which depicts setting the cursor location within the new display area based on the cursor movement detected, which will result in the cursor image within the new display area being displayed at a corresponding location past the common boundary. The process then passes to step 316, which illustrates the process becoming idle until cursor movement is again detected.

The present invention thus employs an input controller/switch to automatically switch input device signals between data processing systems in response to movement of a cursor past a common boundary of logical display areas associated with the data processing systems.

ISSUE

The issue on appeal is whether the rejection of Claims 1-2, 6-7, 13-15 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,473,101 B1 to *Grigor et al. (Grigor)* is well founded.

Because all claims stand or fall together as a single group for purposes of this appeal as indicated below, the resolution of this issue is determinative of the propriety of the rejection of Claims 3, 9, and 18 under 35 U.S.C. § 103(a) as unpatentable over *Grigor* in view of U.S. Patent No. 6,266, 236 B1 to *Ku et al.* (*Ku*).

GROUPING OF THE CLAIMS

For purposes of this Appeal, all pending claims stand or fall together as a single group.

ARGUMENT

I. Introduction

Claims 1-2, 6-7, 13-15 stand finally rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 6,473,101 B1 to *Grigor et al.* (*Grigor*). That rejection is not well founded and should be reversed.

II. *Grigor* does not disclose the "switching means" recited in the Group I claims

Grigor does not render the claims of Group I unpatentable because that reference does not teach or suggest each feature of exemplary Claim 1. For example, *Grigor* does not disclose a set of data processing systems having:

> switching means including an input controller coupled to said single set of input device and to each of said at least two data processing systems, wherein said switching means, responsive to the active data processing system signaling movement of the cursor past a logical common boundary between two logical display areas, for automatically switching transmission of signals from the single set of input devices from the active data processing system to another data processing system corresponding to a logical display area sharing the logical common boundary with the logical display area for the active data processing system, wherein the other data processing system becomes the active data processing system.

(Claim 1, lines 9-16). That is, exemplary Claim 1 requires a "switching means" that switches input device (e.g., keyboard or mouse) signals between data processing systems in response to an active data processing system signaling movement of a cursor past a logical boundary between display areas. Such a "switching means" is not taught or suggested by *Grigor*.

At page 3 of the Final Rejection, the Examiner cites a combination of the control logic 62 and controller 72 shown in *Grigor's* Figure 1b as teaching the claimed "switching means." However, as is evident upon inspection of *Grigor's* Figure 1b and the accompanying description found at col. 4, lines 14-25, *Grigor's* control logic 62 and controller 72 do not perform the switching function required of the claimed "switching means" by exemplary Claim 1. That is, *Grigor's* input device signals (or position indication data) 30 are always received and processed by control logic 62. Control logic 62 does not transmit (output) the input device signals (even to

controller 72), and in particular, does not switch transmission of input device signals between an active data processing system and another data processing system, as required by Claim 1.

Grigor instead teaches that control logic 62 determines which of multiple display devices should be updated by comparing the cursor position indicator and pan locking rectangle and then outputs control data 70 indicating to controller 72 which display data to obtain from memory 14. (*Grigor*, col. 4, lines 14-25). This control data 70, which indicates to controller 72 which display data to obtain, is not the position indication data 30 that the Examiner cites as teaching the claimed input device signals. Moreover, the display data output to the display devices by controller 72 does not constitute input device signals. Accordingly, *Grigor's* control logic 62 and controller 72 cannot perform the switching of input device signals between data processing systems as claimed. *Grigor* therefore does not teach or suggest the claimed "switching means," and the rejections of exemplary Claim 1, similar Claims 7 and 15, and their respective dependent claims are overcome.

It should be noted that Applicant recognizes that *Grigor* clearly teaches panning a mouse cursor between multiple displays, for example, in Figure 5a. However, as should be appreciated from the foregoing, *Grigor's* technique for panning the mouse cursor between display devices does not entail any switching in the transmission of input device signals, regardless of how many processing devices are implemented by *Grigor*. It is therefore clear that *Grigor* simply teaches a different, and patentably distinct, technique for panning a mouse cursor across multiple displays.

III. Summary

In view of the foregoing arguments, which demonstrate that *Grigor* does not teach or suggest the switching means recited in the present claims, the final rejection of each pending claims is overcome.

Please charge **IBM Corporation Deposit Account No. 50-0563** in the amount of $320.00 for submission of a Brief in Support of Appeal. No additional fee is believed to be required; however, in the event an additional fee is required please charge that fee to **IBM Corporation Deposit Account No. 50-0563**.

Respectfully submitted,

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APPENDIX

1. A set of data processing systems operating utilizing a single set of input devices, comprising:

a single set of input devices including a pointing device;

at least two data processing systems sharing the single set of input devices, each data processing system having a logical display area logically arranged to have at least one boundary in common with a logical display area for another data processing system, wherein a pointer driven cursor controlled by the pointing device is located within a logical display area for an active data processing system receiving input signals from the single set of input devices; and

switching means including an input controller coupled to said single set of input device and to each of said at least two data processing systems, wherein said switching means, responsive to the active data processing system signaling movement of the cursor past a logical common boundary between two logical display areas, for automatically switching transmission of signals from the single set of input devices from the active data processing system to another data processing system corresponding to a logical display area sharing the logical common boundary with the logical display area for the active data processing system, wherein the other data processing system becomes the active data processing system.

2. The set of data processing systems of claim 1, wherein the at least two data processing systems further comprise:

an array of data processing system displays, each data processing system display corresponding to a different data processing system having a logical display area.

3. The set of data processing systems of claim 1, wherein the switching means further comprises:

a universal serial bus connection of the single set of input devices to each data processing system.

4.-5. (canceled)

6. The set of data processing systems of claim 2, further comprising:

a logical arrangement of display areas for the at least two data processing systems which corresponds to a physical configuration of display devices for the at least two data processing systems, wherein logical display areas for data processing systems having physically adjacent display devices share a logical common boundary.

7. A method for operating multiple data processing systems using a single set of input devices, said method comprising:

an active data processing system receiving signals from a pointing device within the single set of input devices controlling movement of a cursor within a first logical display area for the active data processing system;

responsive to movement of the cursor past a logical common boundary between the first logical display area and a second logical display area of an inactive data processing system, said active data processing system signaling an input controller coupled to said active data processing system and coupled to the inactive data processing system; and

in response to said signaling by said active data processing system, said input controller automatically switching transmission of signals from the single set of input devices from the active data processing system to said inactive data processing system, such that the inactive data processing system becomes the active data processing system and input signals from the single set of input devices control movement of the cursor within the second logical display area.

8. (canceled)

9. The method of claim 7, further comprising:

connecting the data processing systems to the input controller utilizing a universal serial bus.

10.-12. (canceled)

13. The method of claim 7, further comprising:

arranging logical display areas for the data processing systems to correspond to a physical configuration of display devices for the data processing systems, wherein logical display areas for data processing systems having physically adjacent display devices share a logical common boundary.

14. The method of claim 7, further comprising:

arranging logical display areas for the data processing systems in an array of contiguous logical display areas.

15. An automatic input switching device, comprising:

an input controller;

an input connection within the input controller for a single set of input devices including a pointing device;

output connections within the input controller for at least two data processing systems;

switching logic within the input controller at least two data processing systems transmitting input signals from the single set of input devices to an active data processing system, wherein the switching logic, responsive to receipt of signaling from the active data processing system indicative of movement of a cursor past a logical common boundary between the logical display area of the active data processing system and a logical display area for another data processing system, automatically switches transmission of the input signals from the single set of input devices from the active data processing system to said another data processing system, wherein said another data processing system becomes the active data processing system.

16.-17. (canceled)

18. The automatic input switching device of claim 15, wherein the output connections further comprise universal serial bus connections.